

Computer Department

Geel 2000 Language Schools

# TECHNOLOGY

**Name:**……………………………………………………

**Class:** ……………………………………………………

# Axis Three DIGITAL citizenship

# Lesson 1 : Explorer in action

## William Tyner

- A cultural anthropologist, technologist and film maker .
- He used digital technology in his work, and find real solutions

For problems .

- Works with different organization that help individuals to connect together or provide services that help them.

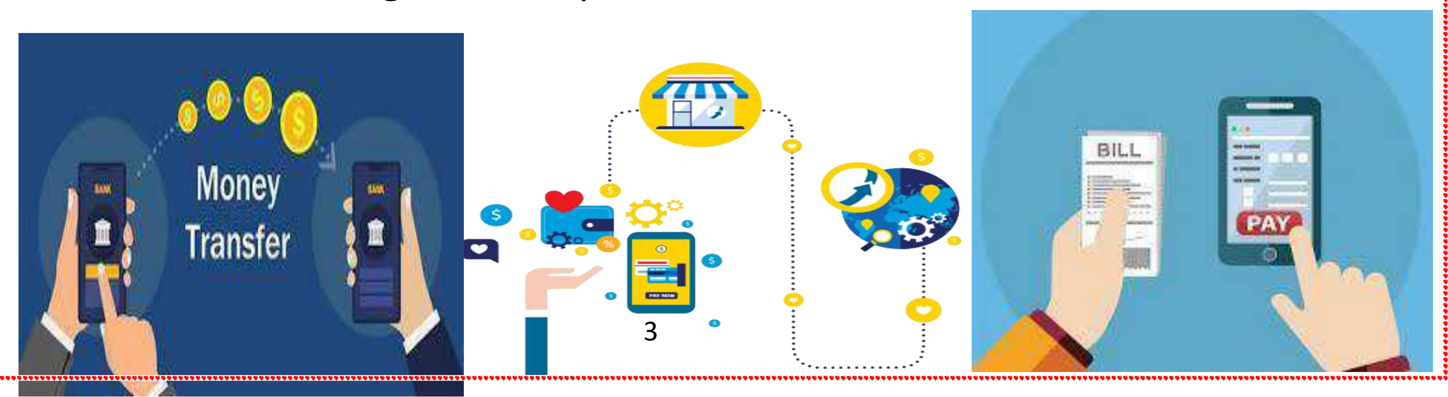


## William believes that :

- Using technology in a positive way, helps people become successful digital citizen.
- Digital communication is important for exchanging opinions and forming good relationship.

## Importance of the digital tools :

- payment of various bills and money transfers through applications .
- online booking of train, plane and bus tickets .



# Exercise

Q1: Choose the correct answers :

1- ……………. help people to build good relationship and exchange opinions.
a. Digital communication
b. Digital footprint
c. Digital citizenship

2- Using technology positively helps people to become……………. citizens.
a. genius
b. successful digital
c. successful

3- Traveling becomes easier by booking tickets for online.
a. trains
b. airplanes
c. all the previous

4- is a digital library that allows Egyptians to access learning materials.
a. EKB
b. Facebook
c. Social media

**2 Put (√) or (X):**

1- William Tyner is specialized in cultural human field.( )
2- William Tyner works to find solutions to problems that benefit communities. ( )
3- ICT tools facilitate the communication among people all over the World. ( )
4- In Egypt, it is difficult to book tickets for trains or airplanes online. ( )

# Lesson 2 : Digital citizenship

## Digital citizenship

- The ability to us digital technology in an ethical ,responsible and safe manner ,take advantage of digital technology , and protect your digital footprint.



## The Digital foot print

- A record of everything you do online, which includes :
- The website you visit.
- Everything you share with others , and what others share about you .

## How to deal with the internet :

- Respect other people and be responsible.
- Use the internet safely by :
  - a- Setting strong passwords
  - b- Using updated software.
  - c- Choosing the websites you visit wisely.
  - d- Monitoring the time you spend online.

## Piracy (hacking ):

The illegal use of content for the purpose of sharing or selling it .



## The rights and responsibilities of digital citizenship



| The Rights | The Responsibilities |
|---|---|
| No one copying or sharing your digital fingerprint without your consent. For example, if you upload videos, songs, or stories of your own design or creation on the Internet, you have the right to protection against hacking . ***Hacking*** **is is the illegal use of content with the intent of sharing or selling it to others.** | Never hack protected content, in order to share it with others or sell it.  |
| **Interact with others online, including:** 1) Communicate with your family members, teachers and friends, 2) Spread positive thoughts to help your community, 3) Express your opinions in a way that does not offend others | - Demonstrate positive behavior in your interactions with others online. - You share with your classmates and friends the things you are comfortable saying face to face and the things you love. |
| - sharing information and entertainment, - and obtained online, while respecting intellectual property rights, - Mention the sources from which you obtained the information. | - Be sure to rate what you are watching or what you are going to share. ask: 1) Is source information safe to view and share? 2) Is the source the result of hacking? |
| Use the Internet when you need or want it, while respecting the law .  | Be sure to evaluate how you use the Internet. 1) Is what you are watching a productive use of time? 2) Does it bring you joy or stress you out? 3) Is the content you are dealing with secure? 4) It is important to strike a good balance between Internet use and personal communication with others. |





### Digital citizenship:

- is the ability to use digital technology tools in an ethical, responsible and secure manner.
- it helps you to protect your digital footprint.



### Digital footprint:

- It's a record of everything you do online, which includes the websites you visit and everything you share with others.
- It may also include what others share about you.



### Online piracy (hacking):

- It's the illegal use of content with the aim of sharing or selling it to others.

# Lesson 3
# Positive effect of ICT

***Digital Person :*** *a person who uses ICT tools to learn and share.*

In 2018 , the Egyptian government provided digital tools and resources to :

- Achieve an educational system based on skills .
- Ensure that all students have access to educational materials .




**Positive effects of ICT:**

- Use the technology digital tools such as: digital books, activities, watching videos and educational TV channels.
- Help people who have speech difficulties to communicate with others or learn the language in school using images.
- Help students who can't leave their homes with health problems to contact with teachers and materials that needed to learn.

## ***Digital Tools :***

- **Video Clips :** ( learning or teaching new things ) .
  a- learn new things by searching for them through any video
  b- Teach new things by sharing or posting a video of your own making .

- **Social Media**
  a- Communicating with your classmates about project outside school .
  b- Chatting with your friends via videos.
  c- Joining online groups with common interests .





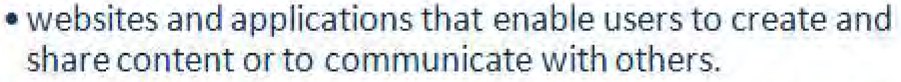
**Video sharing platforms:**

- A website that lets people upload and share their video clips with the public.
- You can use these platforms to learn new things or teach them.
- Notice to ask a family member or your teacher before share any video online.





**Social Media platforms:**



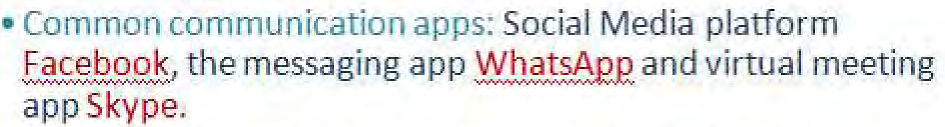
- websites and applications that enable users to create and share content or to communicate with others.



- **You can work with your classmates outside of school on a project.**



- You can join an online group with similar interests in sports, movies and games such as chess.



- Common communication apps: Social Media platform Facebook, the messaging app WhatsApp and virtual meeting app Skype.

- Notice to ask your parents or your teacher before join any group or communicate with someone online.




**Egyptian Knowledge Bank (EKB):**

- It holds webinars for teachers, students and parents, to provide guidance and advice on how to register and use the site.

## *Egyptian knowledge Bank (EKB)*




- Provide Egyptian citizens with access to educational materials in the digital library.
- Holds webinars for teachers , pupils and parents .
- Provide instruction and advice on how to register and use the sites .

**The importance of the digital tools :**

- They can help a person with speech difficulties to communicate with others .
- Learning the language at schools using pictures.
- Communicating with teachers if you are unable to leave the house.

## *Common communications Application:*

- What's App messaging application.
- Face book social networking platform.
- Skype virtual meeting application.



# Exercise

**Q: 1Choose the correct answer:**

1- ………………………….  is a record of everything you do online.

a. Digital technology  b. Digital footprint  c. Digital piracy

2-  All the following help you to stay safe online, except .................

a- setting strong passwords

b- using updated software

c. committing piracy

3-  If someone tracks your responses on different social networking sites, it's called ………………………..

a. digital footprint    b. digital piracy      c. assumptions

4- Which of the following situations demonstrates commitment to responsibilities while using the internet?

a.  Pirating a video your friend uploaded on video sharing platforms.

b. Evaluating the content and ensuring that the information is safe for display.

c. Spying on others and copying their digital footprint.

5- No one can copy your digital footprint, this is one of your

a. rights    b. privacy      c. responsibilities

6-  One of your responsibilities while using the internet is to information.

a. share              b. evaluate       c- receive

## Q2: Put (√) or (x):

1- Every trace that a person leaves when using the internet is known as digital citizenship. (   )

2-  Achieving digital citizenship entails a set of rights and duties. (   )

3- It is important to have good manners and etiquette when dealing with others online. (   )

4- You have the right to use the internet when you need, with no responsibility. (   )

5- Everyone has the right to protect his content against piracy. ( )

6- You must commit piracy to share or sell digital content to others. (   )

7- Digital citizens can use ICT tools to learn, share, and communicate with others. (   )

8- Digital piracy can help you protect your content from hacking. (  )

9- Using the internet any time you want is one of your responsibilities.  (   )

10- Evaluating sources online is one of your responsibilities. (   )

# Lesson4
# Online Communication

| Synchronous communication | Asynchronous communication |
|---|---|
| • Communication that occurs in real time with instant responses .<br>• Exchanging information or files between two people at the same time.<br>• Such as :<br>- instant video chats<br>- live Tv programs<br>- instant chat room . | • Communication that does not require an immediate response.<br>• Transferring information of files between two or more people without the need for them to be present at the same time.<br>• Such as:<br>- sending a file on e-mail<br>- recorded tutorials. |

## Synchronous Communication

### 1-Video chat :

Video chats allow you to communicate directly with one or more persons through your computer .

***The tools you need to make video chat :*** a device with a camera and speakers and an application for video chat.



## 2-Instant Messaging IM:

- Sending messages to one or more persons that may be texts only with images , audio or video .
- ***The tools you need :*** instant messaging software on your computer or mobile application .

## 3-Chat room

- They allow you to communicate in groups , and focus on just one topic such as a discussion on a particular academic topics.
- People talk to each other about a specific topic in these rooms.
- You need a web browser like Google chrome and chat room application.

## 4-Cell phone mobile application:

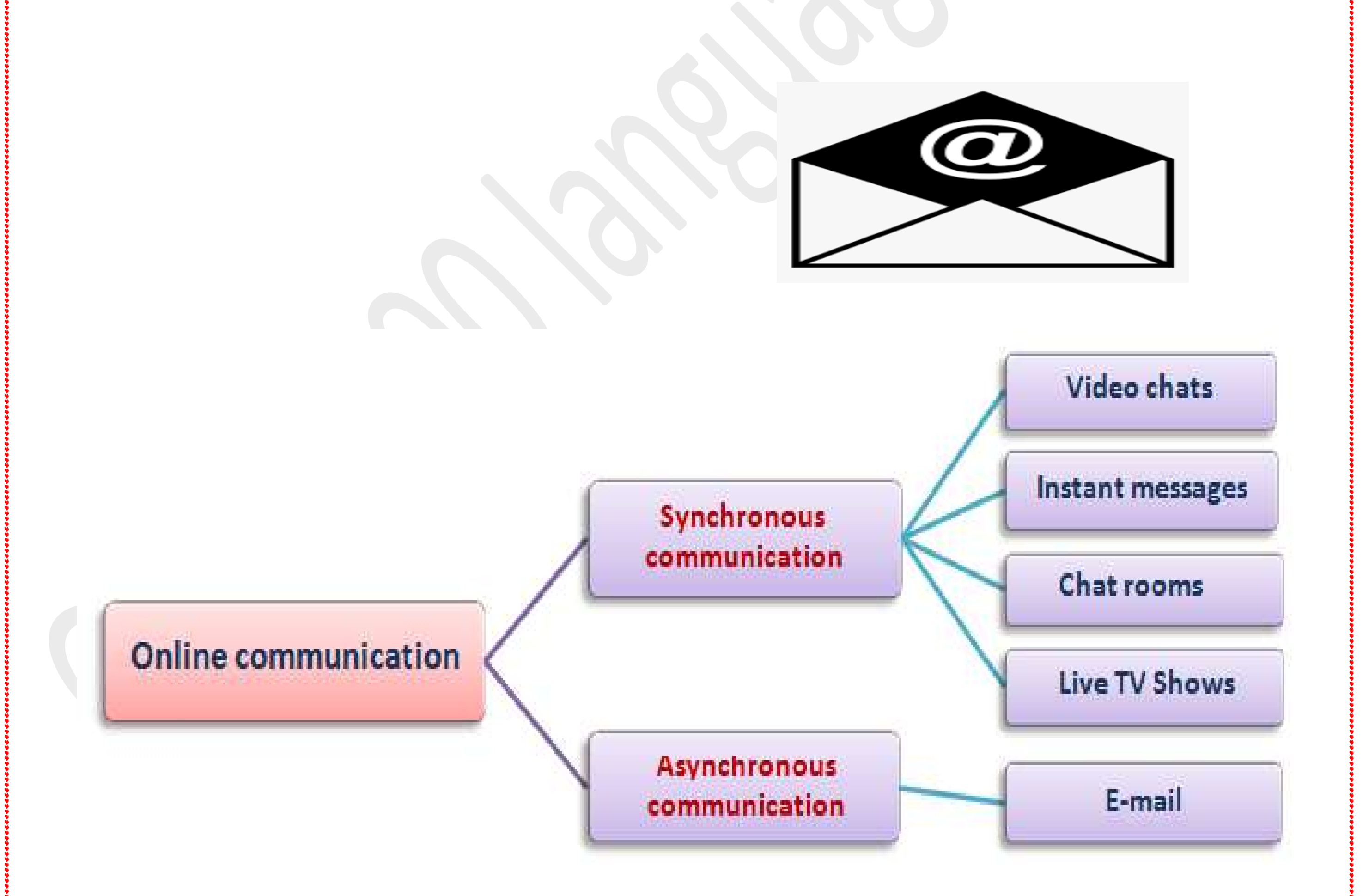
- An application that gives you direct access to various programs in your mobile phone.
- Such as email, instant messaging , social media pages , video chats.
- Some of these application may be pre- installed on your mobile device while others need to be download.

## A Synchronous communication

### 1-Email

- Used to send and receive electronic messages that may be texts or containing an audio recording , image or video.
- It is more formal than instant messaging and texting.
- You need a web browser to access the email website or email application on your mobile device.
- For example:

- Send an email to ask colleague to help you solve problem or to your teacher about a school project .
- Communicate with a governmental body or with an official .



<table>
<tr><th>Synchronous Communication</th><th>Asynchronous Communication</th></tr>
<tr><td>Definition:<br>- It is a communication that happens in real time by instant responses.<br>- Transfer of information or files between two persons at the same time by various digital tools <u>such as</u>:<br>➢ Conversations<br>➢ Instant Video<br>➢ Live TV Shows<br>➢ Instant chat rooms</td><td>Definition:<br>- It is a Communication that doesn’t require an instant response.<br>- Transfer of information or files between two or more persons without reply at the same time by various digital tools <u>such as</u>:<br>➢ Sending file by e-mail<br>Recorded educational programs</td></tr>
<tr><td>Video chats:<br>- Allow you to communicate with one or more persons by a digital device.<br>Needed Tools:<br>- A digital device with camera and speakers.<br>- Cell phone application or video chat software.</td><td rowspan="3">Email:<br>- You can use email to send and receive messages.<br>- Messages are more formal than instant and text messages.<br><br>For example:<br>- Send an email to ask a colleague to help you solve a problem.<br>- Send an email to your teacher about school project.<br>- Use an email to communicate with a government agency or with an official.<br><br>Needed Tools:<br>- A web browser to access the email website.<br>OR<br>- Email app on your mobile device.<br></td></tr>
<tr><td>Instant messages: (IM)<br>- Allow you to send messages using Internet.<br>- Messages can include only text or have images or videos.<br>Needed Tools:<br>- An instant messaging program on your computer or a mobile application.</td></tr>
<tr><td>Chat rooms:<br>- Allow you to communicate with groups and discuss one topic only.<br>Needed Tools:<br>- Internet browser to access the Internet.<br>- OR an application for cell phone such as:<br>Internet Explorer or Google Chrome</td></tr>
</table>

# Exercise

**Q1: Choose the correct answers :**

1- You can make video calls with your friends through your …………
   a- scanner
   b- mobile phone
   c- printer
2- ……………………….. is a form of simultaneous communication via the internet
   a- Instant messaging
   b- E-mail
   c- Video chat
3- …………………. An example of a synchronous communication
   a- Chat rooms
   b- Emails
   c- Tv shows
4- The internet is used to communicate in …………………… connection .
   a- Synchronous
   b- ASynchronous
   c- A & b
5- Instant messaging may include …………………….
   a- Videos only
   b- Pictures only
   c- Text , videos and pictures

**Q2: Put (√) or (X):**

1- Asynchronous communication is a communication that does not require an immediate response.

2- One of the applications of asynchronous communication is instant video chats and live TV programs. )

3- Skype is an asynchronous communication medium.

4- You can communicate with an unknown person online without consulting any of your family members.( )

5- The email application cannot be accessed on your mobile device.()

6- A cell phone application allows you direct chats. ( )

7- Google Chrome is a browser that is used to access the internet. ( )

8- Instant messaging allows you to send text messages, pictures, and videos using the internet. ( )

# Lesson5
# How to use electronic Communication

## How to use ICT tools to communicate?

### 1-Making Video chat

- **To start a call (video chat)**
  1- You create a link to send to the participants
  If you want to join a video chat :
  You have to click on its link and wait until you are allowed to enter by the person who started the video chat .
  2- You can also reply to the video chat by clicking on the phone (video icon).
  3- Make sure the microphone and camera are on , sometimes the person in charge of the chat may turn off other people's microphone.
  4- You can also mute the microphone volume or turn off other people's microphones.
- **If your camera is on( Any one can see you on the call ):**
  1- Dress appropriately .
  2- Act as if you are in a public place.
  3- Speak when it is your turn.
  4- Make sure there is nothing in your background that indicates your address or any person information that you do not want to share .






## 2- Chat rooms

### In a chat room

- You can simply type and submit your comment.
- you can also reply to messages . some participants may reply to your message.
- Remember , any one who has access to the chat room will be able to read your messages so,  be polite , helpful and positive

## 3- Instant message:

- Click on the name of the person you want like to chat with .
- Type your message
- Click the "send" icon .

→Instant message is a fun and informal way to communicate :

- You can use short phrases instead of full sentences.
- You can use symbols and images to communicate , but it is important to be ethical while dealing with others .



# EMAIL:

## *Is used in more formal situations such as:*

- Create an account on the Egyptian Knowledge Bank.
- Email your teacher.

## *To send an email to some one :*

1- Type their email address in the “to” field .
2- Provide clear information about the of the message in the subject line “subject” .

## *when writing an email, be sure*

- Use the correct grammar.
- Be polite and clear
- Use salutation and closing phrases.
- If you are sending attachments, make sure that the information you are sending is secure and accurate.

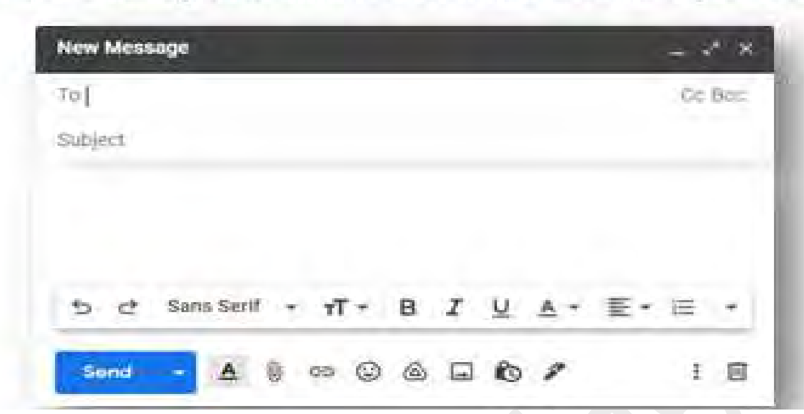


**Steps to send an email to someone:**

- Type their email address in "to:" line.
- Provide clear information of the message in the "subject:" line.
- When writing an email, make sure to use correct grammar.
- Click the "Send" icon.

**Sending email rules:**

- Be polite and clear.
- Use greetings and endings.
- Be sure when sending attachments that are safe and accurate.




# Exercise

**Q1: Complete the following sentences using the words between the brackets:**

(video chat - Send- Instant messaging - phone/video - email)

1- When writing a message on ............. you must use greeting and ending phrases.

2- During the video chat, you can reply to the conversation by clicking no the ................. icon .

3- To join a .........................you have to click on its link and wait for it to be done "Allowing you to enter" by the person who started the conversation.

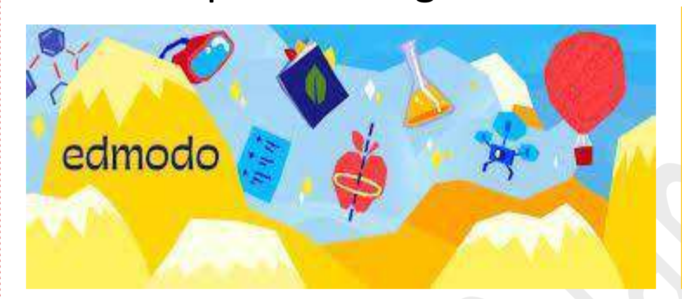
4- To send an instant message, click on the "............" icon.

5- ................................ is a means of communication that enables you to use short phrases as well as symbols and images to communicate

# Lesson 6
# Online learning environments and sources

## Online learning environments:

- Online learning environments, like “edmodo”
- Allow teachers and students to communicate with each other no matter where they are.
- Teachers can provide virtual lesson and upload quizzes and homework assignments for students to access.
- Students can also send messages to their teachers, and post their completed assignments.






## Online learning sources:

There are multiple online learning sources that can help you to learn about different subjects. Here are just a few example :

### 1-Egyptian knowledge bank:

- The first electronic library in Egypt that contains resources on a variety of topics.
- It enables you to search and view
  ➔ Various topics – Digital articles – videos by simply clicking on them.



## 2-<u>Vlaby</u>

- A virtual labs platform that :
  - Enables students and teachers to do lab experiments in an interactive environment.
  - It's not only informative ,but it is fun .

## 3-<u>National geographic Kids</u>

➔ A popular online source for kids that enable them to find information on a variety of topics from animals and science, to history and even geography.

## 4-<u>Map Maker Interactive</u>

➔ Interactive feature of National Geographic.

➔ Mapmaker interactive provides online world mapping tools for students and teachers

➔ The use of map-related topics data and tools .



## Online learning sources




**Egyptian Knowledge Bank (EKB):**

- The first electronic library in Egypt that contains resources of variety of subjects.
- You can search and view different topics, digital articles and videos with just a click.



**Vlaby:**

- A virtual labs platform that enables students and teachers to do lab experiments in an interactive environment.
- It isn't only informative, it is fun too!




**National Geographic Kids:**

- A popular online resource for kids to find information on a variety of subjects, about animals, science, history and geography.




**Mapmaker Interactive:**

- A special interactive feature provided by National Geographic.
- Mapmaker Interactive provides online mapping tools for students and teachers.
- It allows using of map themes, data, and tools.

# Exercise

Q1: Choose the correct answer:

1- Which of the following sites can your teacher use to deliver lessons online?

a. EKB platform b. Edmodo platform

c. WhatsApp application

2- A friend of yours wants to learn about the history of ancient Egypt, which platform would you recommend?

a. The Egyptian Knowledge Bank

b. Video sharing platforms

c. Social media platforms

3- Which of the following online learning resources would you recommend to your friend who wants to conduct an experiment to find out the boiling point of water?

a. The Mapmaker Interactive

b-Vlaby platform

c- The Egyptian Knowledge Bank

4- ……………. enables anyone to build smart and beautiful maps.

a-The Mapmaker Interactive

b- Vlaby platform

c-The Egyptian Knowledge Bank

5- can provide virtual lessons with online learning environments.

a. Vlaby b. Facebook c. Edmodo

6- ………………….. is the first electronic library in Egypt

a- The map maker interactive

b- Vlaby

c- The Ekb

7- ………………… is popular sources that enable children to find information such as animal and science

a- Map maker interactive

b- National geographic kids

c- Egyptian knowledge bank

# Lesson 7
# Planning for digital research

## Conducting a digital search for reliable content:

- It's important to plan before conducting a digital search . planning will help you focus on the information you 're trying to gather.

### 1-choose your topic

Think : what do you know about the topic ?
What additional points do you want to learn about it ?
Write some notes

### 2-choose the type of electronic resources you will use :

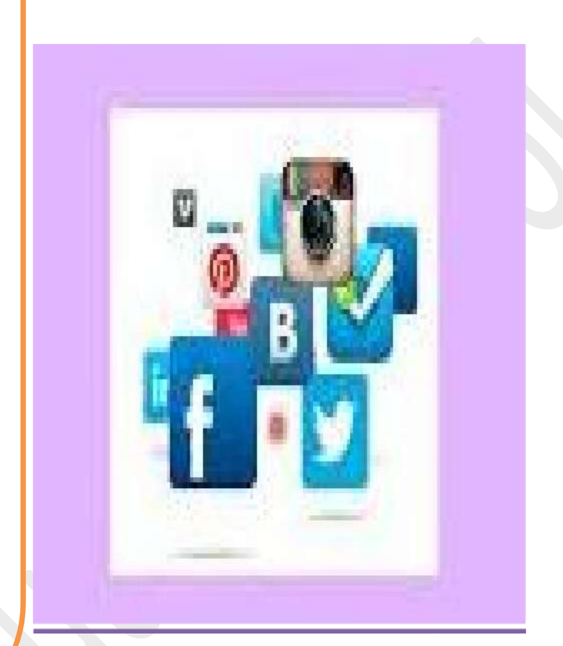
Digital search can include audio , video and image sources, not just text sources.
Consider asking your teacher, parent, or school librarian for advice about which sources to use for your research .

### 3-prepare to evaluate the types of sources you have chosen are they reliable or unreliable ?



## ***Unreliable sources***

- You may find factual information on social media sites, such as Face book , wiki pages , and blogs . However , you are also likely to find information full of opinions, errors , and even lies.
- You must be wary of information you find on these types of sources .



## ***Reliable content:***

- Reliable sources are articles or information written and verified by experts .
- The information is presented in a professional fashion. The sources information is well-written without grammar or spelling mistakes.



## ***As you conduct your digital research, be sure to :***

- Focus on the topic you are researching
- once you find information that seems to answer your questions ,evaluate it. Is it reliable?
- After you are determined that the information is reliable ,take thorough notes .
- Be sure to write down what you're going to use from the source material.
- Don't forget to cite the sources information in your notes.
- You will need to credit the source in your report.

## ***Organizing and writing your report :***

### ***After you have complete your online search***

1- Gather your notes and reliable source information
2- Use your notes to write an out line .
3- The outline helps you present the information in your report in a logical way .

## ***Writing an outline :***

### **An outline should include**

- An introduction that introduces the topic of the report
- Supporting paragraphs that present the information
- A conclusion or final thoughts on the information that you have presented




| Reliable Sources | Unreliable Sources |
|---|---|
| - Reliable sources are articles or information written and verified by experts. | - You may find correct information on social media such as Facebook, wiki pages, and blogs. |
| - The information is presented in a professional present. | - You also likely that you will find information full with opinions, mistakes and even lies. |
| - The source information is well-written without grammar and spelling mistakes. | - You have to be careful when using the information you find in these types from sources. |

## Exercise

**Q1 : Choose the correct answer:**

1- When conducting research, it is necessary to mention the in the final report.

a. articles

b. outline

c. sources of information

2- ………………… are always written and verified by experts.

a. Reliable sources

b. Inaccurate

c. Unreliable sources

3- Facebook, Wiki pages, and blogs are ……………. sources.

a. reliable

b. accurate

C. unreliable

4- ……………………… is the first step of conducting a digital search and obtaining reliable content.
a. A reliable source
b. Defining the topic of the research
c. The scheme
5- Social media sites, such as …………………. may include information full of opinions and errors
a. Facebook
b. EKB
c. Google

6- Ahmed wrote a research paper on tourism in Egypt and he quoted a part of a research from the Egyptian Knowledge Bank platform he must ………………………
a. refer to publishers or authors in the research paper
b. publish the research without referring to the publishers
c.share the researches of others to sell them without their permission

7- It is essential that your research plan includes ……………………..
a. paragraphs providing information
b. information of questionable
c. digital blogs

8- When conducting a digital search, your outline must include ……..
a. an introduction to the research topic
b. details far from the research topic
c. unreliable information

# Lesson8

# Synchronous & Asynchronous communication

- The internet allows us to communicate instantaneously.
- We can send a quick message
- have a friendly conversations quickly check doubts with people who are not present ,but instant communication is not always a good thing.
- Some time we need to give ourselves, or the people with whom we are communicating time to consider information we send our question or their answer.
- So it is important to know when each type of communication is appropriate





## ***Synchronous communication is appropriate:***

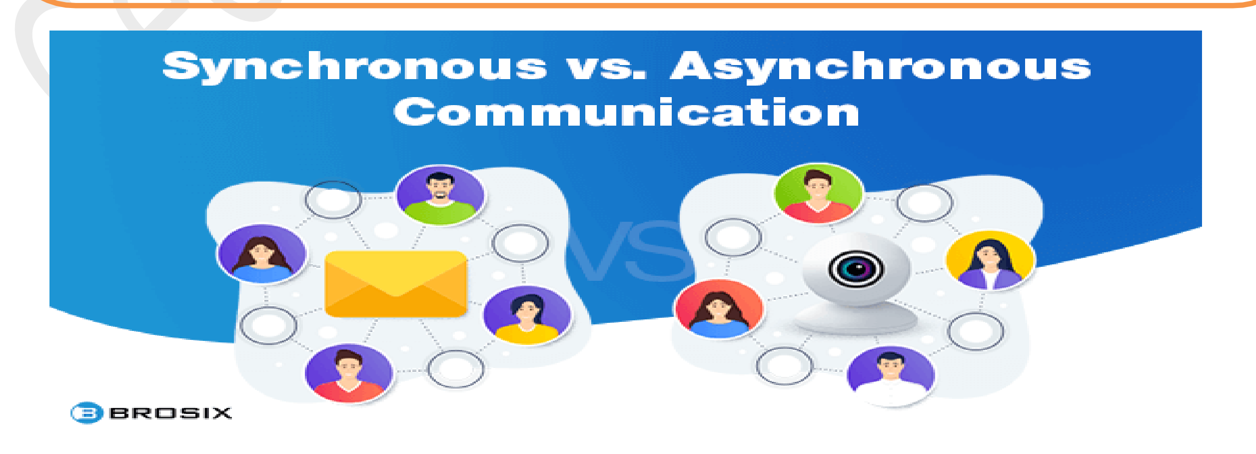
- Between friends or close family
- When the information is urgent or needs to be transmitted quickly
- When the information is about day – to day matters.
- When an answer does not require very much thought or preparation .

## ***A Synchronous communication is appropriate:***

- Between people who do not know each well.
- When the information is important but not urgent
- When the information is about sensitive or complex matters.
- When an answer requires thought and preparation .

***Remember***

- *Online4 learning environments include synchronous and asynchronous methods of communication.*
- *Choose the correct tool depending on the situation,*



## Synchronous and asynchronous communication

**Synchronous communication is appropriate:**

- Between friends or close family members.
- When information is urgent or needs to be transmitted quickly.
- When information is about day-to-day life matters.
- When the answer doesn't require much thought or preparation.

**Asynchronous communication is appropriate:**

- Between people who don't know each other well.
- When information is important but not urgent.
- When information is about sensitive or complex matters.
- When an answer needs to be thought and prepared.

## Exercise

**1- Put true or false :**

1- Synchronous communication doesn't happen in real-time. ()

2- Simultaneous communication is appropriate when it is between close family members. )

3- Asynchronous communication is appropriate when the information is important and requires rapid action. ( )

4- Online learning environments include synchronous communication only. ( )

5- We use simultaneous communication to have conversations with ( ) people who live far from us.

6- The internet only allows us to communicate simultaneously. ( )

7- Simultaneous communication is not always a good thing. ()

# Axis Four Software Projects

# Lesson 1
# Action Explorer

## Internet of Elephants

### Gautam Shah

- He is the founder of "internet of Elephants " organization.
- He is an expert in the field of information technology.
- He started to search for ways for using technology and games to save the wildlife.

### Internet of animals

- An organization that uses innovative digital tools to strengthen the relationship between people and wildlife to save the animals all over the world.

- Gautam Shah used all data collected by the GPS to design interactive unique games on the on the internet using Augmented Reality Technology.

**The Internet of Elephants**

- It is an organization that uses ground-breaking digital tools to connect people with wildlife around the world.




- The team at *Internet of Elephants* with other animal conservation organizations from all over the world.
- The team uses the data which they collect via GPS to design interactive online games.
- *Internet of Elephants* creates unique mobile games, using augmented reality technology, and data display effects that allow people to interact with wonderful creatures.

-

# ***Augmented Reality Technology.***

- It allows us to see the real environment of things we want to see & provides information of them through digital tools.
- These games tell us the story of each animal and the player can track the wildlife of each animal individually .

**Exercise**

**Q1: Put (√) or (X):**

1- Augmented reality technologies help to provide information to you interactively.

2- Internet of Elephants is an organization concerned with wildlife. ( )

3- Internet of Elephants uses the data collected via the GPS to design interactive games. ( )

4- Wildlife conservation is protecting animals in the zoo.( )

5- Mr. Shah believes that using technology in online games brings wildlife into people's daily lives. ( )

6- Internet of Elephants creates unique mobile games using augmented reality. ( )

**Q2: Complete the following sentences using the words between the brackets**

(IT specialist - augmented reality - GPS-Wildlife conservation)

1- …………………… is protecting animals in their natural habitats.

2- Internet of Elephants creates unique mobile games using ………………..

3- Gautam Shah worked in many countries as ……………………………

4- They use the data they collected by…………… to create online games.

# Lesson 2
# Problem Solving Skills

## How to solve problems

- Divide the problem into small parts , then start solving it gradually .

### Problem :Your teacher asked you to help him in organizing a class trip

1- Select the location of the trip .
2- Select the date of the trip .
3- Ask about the price for each student .

4- Determine how your colleagues will reach the location of thetrip .
5- Decide what items the students must bring .
6- Make a list of the rules that must be followed on the trip day.

1- Make sure that the keyboard cable is connected to the correct position .
2- Turn on the computer .
3- Ask your teacher to help you solve the program
4- Open the word program.
5- Write some letters on the “Word ” program.

## The important terms:




**Problem-solving skills:**

- It is a set of steps that you use to solve a problem of ICT.
- It makes the problem solving process easier.
- If these problems are complex, work on breaking these problems into small parts (sections) and solving them step-by-step.



**A hypothesis:**

- It's an educated guess about how things work.
- It is an attempt to answer your question with an explanation that can be tested.

## Examples of solving ICT problems

### The speakers are not working:

- Check the cable of speakers into C.P.U.
- Check the cable of speakers into electricity.
- Restart your computer.
- Ask your teacher or a family member to help.

### The computer is having difficulty responding to user commands:

- Press **"Alt + Ctrl + Del"** from keyboard together.
- Restart your computer.
- Ask your teacher or a family member to help.

### Word program is not responding to typing:

- Make sure the keyboard connection cable is plugged into the correct place.
- Reopen the Word program.
- Write some letters on the word program page.
- Try another keyboard and plugged its cable in the correct place.
- Restart the computer.

## Steps to solve a problem:

- Building a hypothesis.
- Test your hypothesis.
- If your test isn't successful, don't worry. we learn from our mistakes.
- Learn how this can help you make your next hypothesis.
- If you have a group of people solving a problem, assign each person one section.

## Exercise

**Q1: Choose the correct answer:**

1- ………………… is an attempt to answer your question with an explanation that can be tested.
a. Hypothesis building b. Hypothesis testing c. Solving problems

2- You should be careful when solving problems that may pose a risk to you during the ……………………step.
a. building hypotheses
b. collecting data on hypotheses
c. hypothesis testing

3- While turning on the computer, you found that it is not responding. You guessed that there was a malfunction in the operating switch,

this guess is called…………………………..
a. hypothesis
b. digital citizenship
c. digital footprint

4- To provide the proposed solutions to solve the problem of the computer speakers not working, you must first.
a. test the hypotheses b. prepare the hypotheses
c. verify the success of the test

5- If your teacher asks you to solve a specific problem, you must ……… the problem.
a.leave
b. break down
c- prepare

6- The first step in problem solving is ……………………….
a. hypothesis testing
b. hypothesis
c. hypothesis building

7- The first step we take to prepare a healthy meal is …………………..
a. preparing the meal b. finding a recipe
c. bringing ingredients

8- The last step in organizing a trip is …………………………………..
a. making a list of the rules
b. deciding the location of the trip
c. selecting the trip date

# *Lesson 3*

# *Presenting information to others*

Think about the digital tools you'll need to best presentation of information.

**Create a digital poster or billboard design**

**Office 365's bundle:**

- It is a suite of apps that help you stay connected and get things done.
- Such as: Word® · Excel® · PowerPoint® · Microsoft Teams® · Publisher®.




**When creating your poster or billboard, think about the following digital concepts:**

## Margins

- A margin is the space left around the edges of a poster or billboard.
- It is important to leave this space empty.
- If you add content too close to the edges, the poster or billboard will look cramped and crowded.
- A 25 mm margin will help design a good poster.

## Font size and type

- If you choose a small font size, your audience will have to work hard to try to read the information.
- If you choose font size that's too big, you will have to shorten the information you share.
- Make sure to choose a font size that is easy to read.
- **Simple** is better, a complicated font is distracting and hard to read.

## Colors

- Choose colors that help you get your message across.
- Use color combinations that match.
- It is best to use no more than three colors in the poster.
- Take in consideration the color of the background when choosing the font color.

## Images

- Use images that match with the content you are sharing.
- Use clear, good-quality and appropriate images.

**Example:**

### Wildlife Conservation

- Protect plant and animal habitats.
- Protect wild animals from pollution.
- Protect wild animals from hunted and sold.



## Exercise

**Put (√ ) or (X):**

1- Microsoft 365 includes Microsoft Word, PowerPoint and Publisher. ( )

2- To access Microsoft 365's bundle, you will need to have an updated digital device. ( )

3- It is important to crowd the edges of your billboard. ( )

4- Having a fixed margin of 25 mm helps you create a well-designed poster. ( )

5- While creating a poster; it is preferable to choose a large font. ( )

6- If you choose big font size, your audience will have to strain to read the information. ( )

7- We don't need images and colors to design a poster or digital billboard. ( )

8- More decorative fonts in your poster are not preferable when making it. ( )

9- Don't use more than three colors when making your billboard. ( )

10- It is not necessary to take in your consideration the color of the background when choosing the font color. ( )

# Lesson 4
# Digital applications

- The first thing the explorer does is to research about the topic.
- When you research you need to use a variety of sources.

**The information Sources**

**Print**

Books - Articles - Newspapers - Encyclopaedias

**The Internet**

Search Engine - Specialized Websites

Digital Learning Websites - Egyptian Knowledge Bank

**Interviews**

With people who have experienced, Affected, or who have studied the topic.

## Evaluate The Information Source

| Trusted Source | Questionable Source | Untrusted Source |
|---|---|---|
| ✓ The information comes from a reliable person or organization that uses reliable sources. | ⅄ The information comes from a person or organization that offers some sources. | ✗ The information comes from a person or organization that doesn't have sources. |
| ✓ A reliable person or organization cites sources and states current facts. | ⅄ A person or organization sometimes states their opinion intermixed with facts. | ✗ A person or organization uses opinions with little facts. |

# Using Microsoft Word & Microsoft Excel



## Microsoft Excel:

- Excel allows you to create a spreadsheet with as many columns and rows as you need.
- Excel is used to present numbers because it is able to add them automatically.
- Spreadsheets are an excellent way to gather information and gather your ideas.



## Mirosoft Word:

- Word allows you to present your ideas in a variety of ways.
- Word is commonly used to write whatever you want.
- You can You can change the design, add images, and link your report to websites or information on the Internet.

## *Steps To open Microsoft Word program:*

- Open Internet Explorer Browser.
- Write www.Microsoft365.com in address bar.
- Click Enter from keyboard.
- Sign in with your account on Microsoft 365.



## Exercise

**Q1: Choose the correct answer:**

1- Books, articles, and newspapers are examples of ……………………………

a. prints

b. Word

c. the internet

2- ………………… is/are a reliable source of information on the internet.

a. Publications

b. c. Interviews

c. EKB

3-When you research, you need digital online sources, such as

a. interviews

b. websites

c. printed books

4-………………… information comes from a reliable person and states current facts.

b. Questionable

a. Untrusted

c. Trusted

5- ………………… information states opinions with little facts.

a. Untrusted

b. Questionable

c. Trusted

6- Downloading MS Word from Microsoft website is

a. untrusted

b. unsafe

c. trusted

7- ……………………. program is used for writing your CV. b. Excel
a. Word
b. Excel
c. Photoshop
8- ……………………. program is a perfect way to record data in rows and columns.
a. Word
b. Excel
c. Photoshop

**Q2 : Put (√) or (X):**

1- Humans may have a positive or negative effect on plants and animals in their environment. ( )

2- Information sources should not be evaluated when collected. ( )

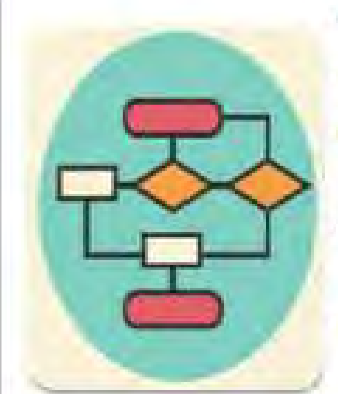
3- Spreadsheet software is an excellent way to gather information and gather your ideas. ( )

4- The explorer uses the internet or publications to research a topic. ( )

5- You can insert images into Excel files.( )

6- You can change the font size and type on MS Word.( )

# Lesson 5
# Digital applications



**Algorithm:**

- It is **a series of steps** that explain how to do a task.
- The search engine uses algorithms to provide results.
- When you enter the keywords you're searching for, the search engine takes steps to provide results.
- Algorithms help search engine to decide which results will be more relevant to your research.
- If your wording is not specific enough, the engine's algorithm may not be entirely accurate.
- Computers and applications use algorithms to perform specific tasks.

**Example:**

Many of the things you do every day can be described as **algorithms,** a series of steps

**Example:**

Many of the things you do every day can be described as **algorithms,** a series of steps

Steps to clean your room:

1- Clean the dust.
2- Wipe flat surfaces.
3- Clean the floor.



Steps to give direction:

1- Go straight ahead.
2- Turn Right at 'X'.
3- Turn Left at 'Y'.



- If you are using a search engine to find directions to a place, it will use a database of names and information from digital maps to provide you with the results.

## Exercise

**Q1: Choose the correct answer:**

1- ……………….. are a set of arranged steps to solve a problem.

b. Algorithm

a. Search engine

c. Keywords

2- You can type …………………….. into the search engine to search

for

information online.

a. full sentences

b. algorithms

c. Keywords

3- When you prepare a meal, you follow a/an

b. algorithm

a. recipe

c. instruction

4- An algorithm is a……………………..

a. series of steps

b. software

c- application

c. keywords

5-Which of the following is considered an algorithm?

a. Seeing a movie

b. Solving a math problem c. Eating breakfast

**Q2: Complete the following sentences using the words between the brackets**

(Algorithm-research subject - Computers - keywords - GPS - recipe)

1- If you use a search browser to find directions to a certain place, it uses data to provide you with results.

2- When you prepare a meal, you follow a…………………………… that is a kind of algorithm.

3- ………………. is a series of steps that explain how to perform a task.

4- ………………….. and applications do algorithms to perform functions.

5- Algorithms help determine which results are most relevant to the ……………………………

6- Every time you enter ………………………… that you search in a search browser, i uses certain algorithms to give you the results.

# Lesson 6

# The principles of coding

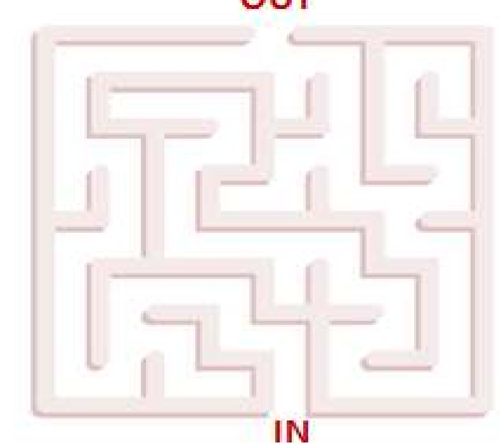



**Coding:**

- It is writing of multiple algorithms to make a complete program.
- You can create animations, movies and video games using code.
- There are many websites like **Code.org** that can help you learn to code using different programming languages.




You can create mazes on Code.org. Mazes are just one example of things you can create using coding.




**Example:**

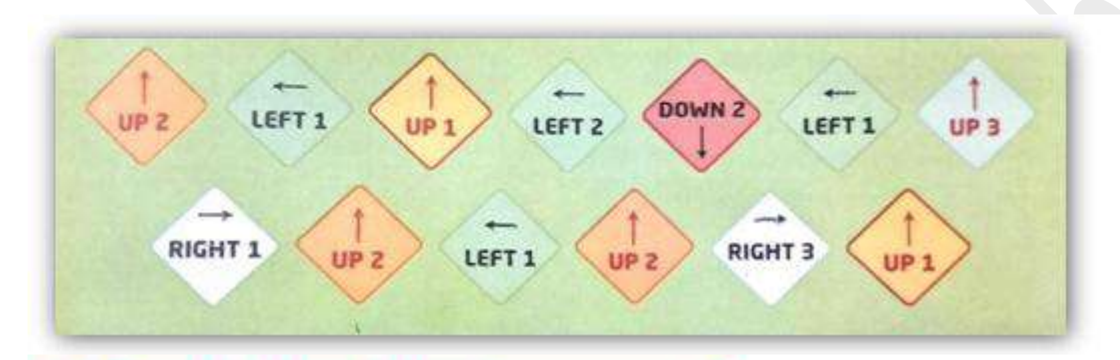
- Think about the steps you can use to get through the maze.
- The steps contain the number of spaces to take, and in which direction.
- Follow the steps to get through the maze.

**Instructions to solve a maze:**

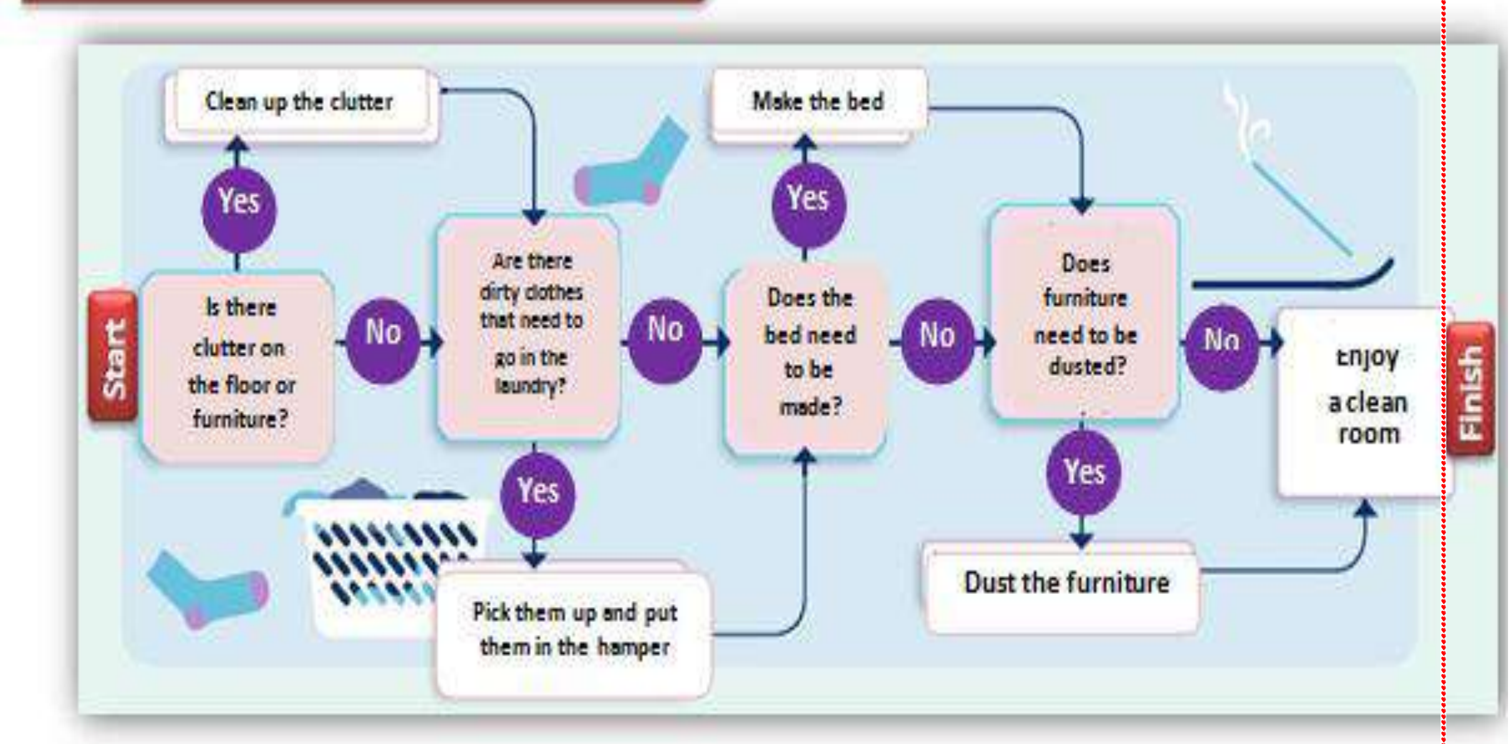


**Flowchart:**

- A flowchart is like coding, It represents a problem in logical and simple steps.
- A flowchart is a visual diagram that shows the steps of any process from beginning to end to solve a problem.
- It is using process boxes, flow lines/arrows and other symbols.




## A flowchart about cleaning your room:



## Exercise

**Q1: Choose the correct answer:**

1- …………………. is writing multiple algorithms to create a complete program.

a. Windows

b. MS Word

c. Coding

2- There are many websites like ………………… that help you learn coding

a. EKB.com

b. Code.org

c. Facebook.com

3-Online video games are created using ……………………

a. Excel

b. coding

c. Word

4- The …………………. that you see is/are built using coding.

a. animations

b. movies

c. a & b

5- You can........... at Code.org.

a. design a billboard

b. create mazes

c. play a game

**Q2 : Put (√) or (X):**

1- You can use coding to identify the paths needed to reach your goal. ( )

2- You can create mazes on Code.org.(   )

3- Computers, like humans, use different languages. (   )

4- There are many websites, such as Facebook.com, that can help you
learn different programming languages. (  )

5- The cartoons and movies you watch online are designed by Excel. (  )

# Lesson7

# Graphic Art

## Microsoft Paint

It's a popular graphics editor. It's easy to create your own drawings or edit images on computer.

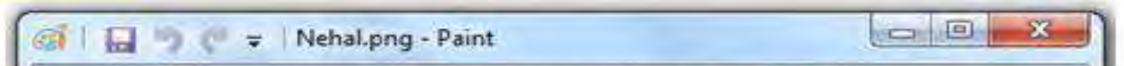
***Steps To Open Microsoft Paint:***

- Open Start-up Menu.
- Click Accessories.
- Click Paint.




## The components of Microsoft Paint screen:

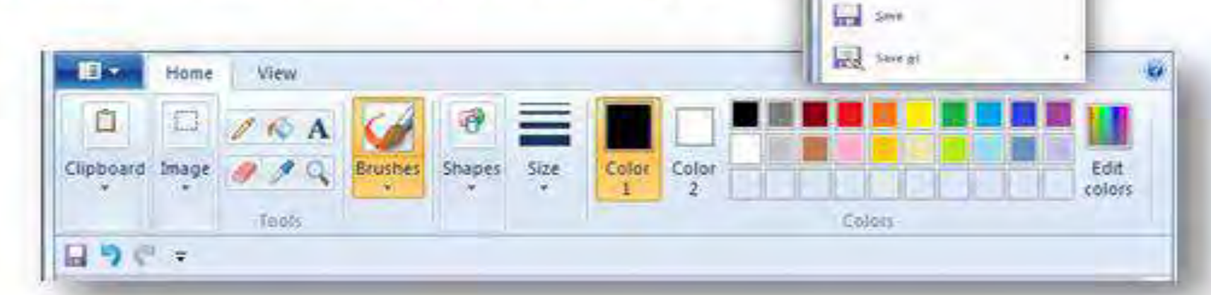
### 1- Title bar




Includes file, program name & control buttons Like Word and Excel program

### 2- Menu bar

Includes options for open and save file.
Includes the ability to edit colors and images.




### 3- Toolbox.

Includes all the tools that you will need to make your drawing.

**These are some of the tools:**

| | | | |
|---|---|---|---|
| | Ellipses<br>Use to draw a circle or an oval shape. | | Rectangle<br>Use to crop an area of the photo. |
| | Magnifier<br>Use to zoom image in or out. | | Airbrush<br>Use to a free draw. |
| | Pencil<br>Use to a free draw. | | Select<br>Use to select and move objects. |
| | Line and curve<br>Use to deaw lines and curves. | A | Text<br>Use to write a text. |
| | Fill<br>Use to fill colors using the color options | | Eraser<br>Use to erase line or mistakes in drawing. |

## Exercise

### Choose the correct answer:

1- ………………… is one of the popular programs that are used for editing pictures.
   a. Microsoft Word
   b. Microsoft Excel
   c. Microsoft Paint

2- The top of the screen of Microsoft Paint is like
   a. MS Word
   b. Excel spreadsheets
   c. a & b

3- …………………… includes options for opening, saving files, and editing features.
   a. Toolbox
   b. Menu bar c. Edit bar

4-You can click on the ……………………..to see the different options, such as icons and shape.
a. Insert menu bar
b.Menu bar
c. Edit bar
5-The ……………. list is used to open the Paint program.
a. Insert
b. Start-up menu
c. File
6-MS Word contains many options, including …………………………….
b. 3D models
c. a & b
a. Shape
7-You can select and cut certain parts of the image in Paint using the
a. crop tool
b. color fill tool
c. brush tool

# Lesson8
# Creating a powerpoint presentation

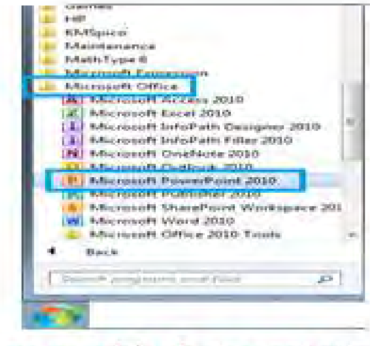


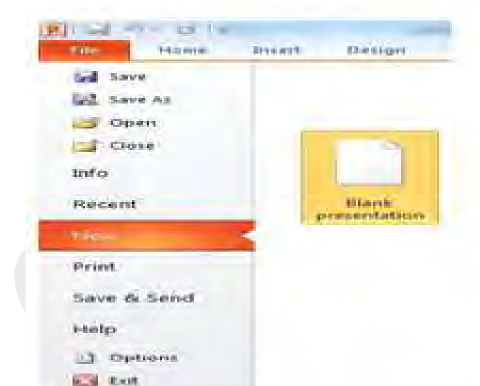
**Microsoft PowerPoint:**

- Microsoft PowerPoint allows you to create presentations that include text, animations, images and special effects.
- A slide is a presentation page that contains text and images.
- On the left side of the screen, you will see a thumbnail, or preview image, of each slide you're creating.
- When creating your presentation keep the following features in mind:
  - Avoid wordy paragraghs or sentences.
  - Be sure to use a font size and style that is readable.
  - Use relevant images instead of text whenever possible.

## Steps to open Microsoft PowerPoint:

- Open start menu.
- Click all programs.
- Select Microsoft office.
- Click Microsoft PowerPoint.




## Steps to create a new blank presentation:

- Open file menu.
- Click New.
- Double-click Blank presentation.

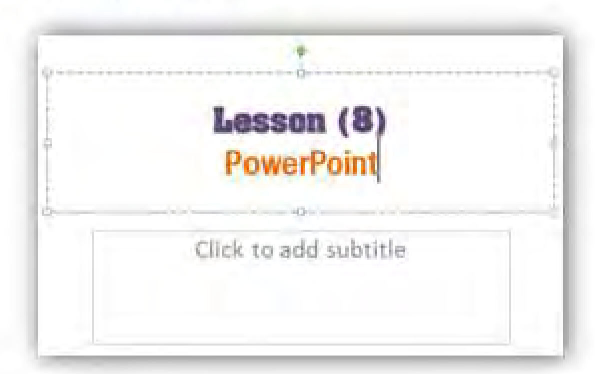



## Steps to add a new slide and choose the layout:

- Open Home bar.
- Click New slide.
- Choose the layout.

### Steps to add text to your slide:

- Click on the text box on the screen.
- Choose font style and size.
- Type your text.

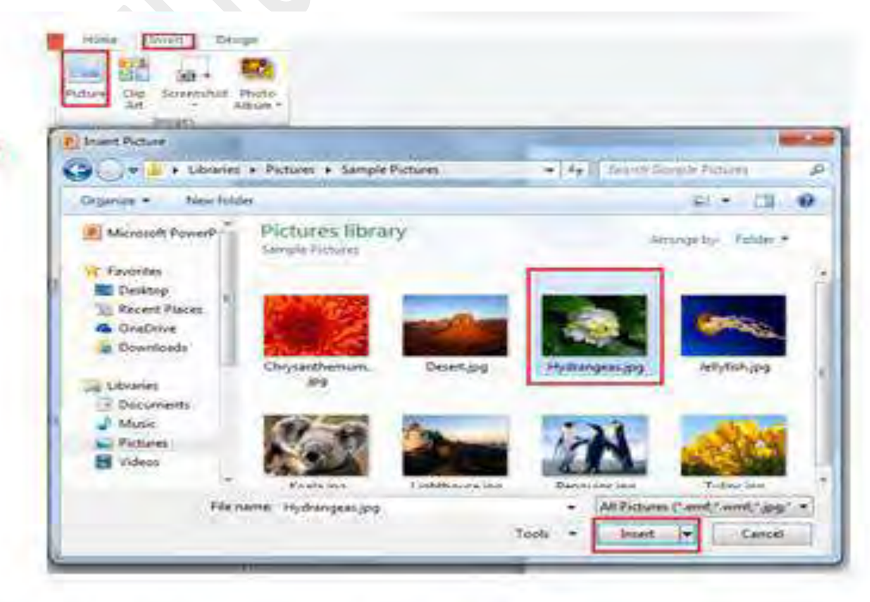






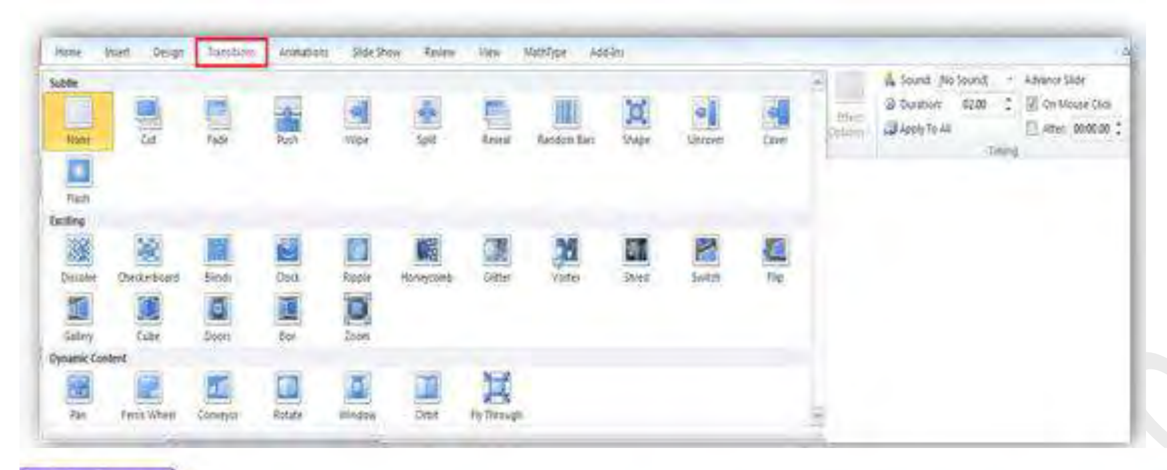
### Steps to insert a picture from file:

- Click Insert menu.
- Click picture.
- Select picture.
- Click Insert.




**Transitions**

Choose a visual effect to use between each slide.



**Design**

Choose design options for each slide, including background colors.




## Exercise

**Put (√) or (X):**

1- It's preferable to use written texts instead of relevant images with your presentation. (  )

2- One of the things to consider when preparing a presentation is to avoid writing long paragraphs. (  )

3- PowerPoint is used to design presentations with texts only. (  )

4- When designing your presentation, avoid wordy paragraphs or sentences. ( )
5- You can specify the way you want to display the slides, and set a time for each slide in the PowerPoint presentation program. ( )
6- You can't insert images you created through another program into your presentation in PowerPoint program. ( )
7- On the left side of the PowerPoint screen, you will see a preview of each slide you're creating. ( )
8- PowerPoint provides many design options for each slide, including background colors. ( )